

Notice of Allowability

Application No.

10/684,548

Examiner

Sean Motsinger

Applicant(s)

SHIKATANI, MOTOKAZU

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 7/21/2007.
2. ☒ The allowed claim(s) is/are 1-36.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date See Continuation Sheet
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


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SUPERVISORY PATENT EXAMINER

Continuation of Attachment(s) 3. Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date: 1/6/2004,10/29/2004,8/30/2005.

Response to Arguments.

1. Applicant's election with traverse of the election is in the reply filed on 7/19/2007 is acknowledged. The traversal is on the ground(s) that there is no search burden. This is not found persuasive because art that reads on one species will not likely read on the other. However all claims have been examined based on the allowable generic claims 1 and 19 as explained below.
2. Claims 1 and 19 are allowable. The restriction requirement, as set forth in the Office action mailed on 6/19/2007, has been reconsidered in view of the allowability of claims to the elected invention pursuant to MPEP § 821.04(a). **The restriction requirement is hereby withdrawn as to any claim that requires all the limitations of an allowable claim.** Claims 3,6,9,12,15,18,21,24,27,30,33, and 36 directed to species II are no longer withdrawn from further consideration because they require all the limitations of an allowable generic linking claim as required by 37 CFR 1.141.
3. In view of the above noted withdrawal of the restriction requirement, applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Once a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no

longer applicable. See *In re Ziegler*, 443 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

Reasons for Allowance

4. The following is an examiner's statement of reasons for allowance: Claim 1 contains the elements "arraying all types of predetermined proper signals used for signals transmitted and bit strings of patterns including errors each derived from each proper signal to thereby generate a different two-dimensional image and disposing a set of received signal patterns, each comprised of an arbitrary proper signal and a group of two-dimensional images of patterns having the arbitrary proper signal added with an error, in a state that enables identification of each proper signal to thereby generate a received signal pattern image" and "using optical signal processing to evaluate a coefficient of correlation between the received signal image and the received signal pattern image to thereby obtain a correlation projection image in which depth and brightness intensity distribution is proportional to the coefficient of correlation; extrapolating transmitted proper signals from a region that includes a maximum point of the depth and brightness intensity distribution appearing in the correlation projection image based on a correspondence between the region and the set of received signal patterns in the received signal pattern image" which are not found in the prior art in connection with each other. As discussed in applicants background section decoding and error correction are usually preformed by electrical means not optical means. A prior art system that

does use optical signal processing is in US 6,275,311 Boffi et al. Boffi et al. receives a serial input and arrays this serial input into a 2-dimensional image as in the claimed invention (see abstract.) Then decoding (see column 8 lines 5-15) capable of error correction is performed as in the claimed invention (see column 8 lines 5-15).

However this decoding would not involve "arraying all types of predetermined proper signals used for signals transmitted and bit strings of patterns including errors each derived from each proper signal to thereby generate a different two-dimensional image and disposing a set of received signal patterns, each comprised of an arbitrary proper signal and a group of two-dimensional images of patterns having the arbitrary proper signal added with an error, in a state that enables identification of each proper signal to thereby generate a received signal pattern image" and use it to "evaluate a coefficient of correlation between the received signal image and the received signal pattern image" because the processing in Boffi et al. is performed with logic gates and does not calculate a "correlation projection image". The remaining references cited also do not perform the two elements mentioned above. Therefore Claim 1 is allowable over the prior art. Claim 19 is the apparatus written as the means for performing the method of claim 1 and is likewise allowable. Claims 2-18 and 20-36 are allowable because they depend from these claims.

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

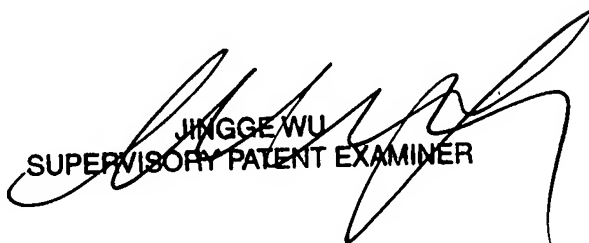
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean Motsinger whose telephone number is 571-270-1237. The examiner can normally be reached on 9-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on (571)272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Motsinger
10/17/2007


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SUPERVISORY PATENT EXAMINER